# Author Index to Volume 5


Akiyama, J. and Harary, F.: A Graph and its Complement with Specified Properties. IV. Counting Self-Complementary Blocks, 103
Anderson, I.: Quadrilateral Embeddings of Bipartite Graphs, 355
Andreae, T.: On the Reconstruction of Locally Finite Trees, 123
Archdeacon D.: A Kuratowski Theorem for the Projective Plane, 243

Barefoot, C. A. and Entringer, R. C.: A Census of Maximum Uniquely Hamiltonian Graphs, 315
Bermond, J. C. and Thomassen, C.: Cycles in Digraphs—A Survey, 1
Billionnet, A.: An Upper Bound on the Size of the Largest Cliques in a Graph, 165
Blass, A., Exoo, G., and Harary, F.: Paley Graphs Satisfy All First-Order Adjacency Axioms, 435
Brualdi, R. A. and Shanny, R. F.: Hamiltonian Line Graphs, 307
Buckley, F.; Miller, Z., and Slater, P. J.: On Graphs Containing a Given Graph as Center, 427

Chong-Keang, L. and Yee-Hock, P.: On Graphs Without Multicliqual Edges, 443
Chung, F. R. K.: A Note on Constructive Methods for Ramsey Numbers, 109
Cvetković, D., Doob, M., and Simić, S.: Generalized Line Graphs, 385

deCaen, D.: A Note on Path and Cycle Decompositions of Graphs, 209
Decker, R. W., Glover, H. H., and Huneke, J. P.: The Genus of the 2-Amalgamations of Graphs, 95
de Werra, D.: On the Existence of Generalized Good and Equitable Edge Colorings, 247
Doob, M.: See Cvetković, D.

Entringer, R. C.: See Brualdi, R. A.
Exoo, G.: On an Adjacency Property of Graphs, 371
——: See Blass, A.

Gardner, M. L.: The λ-Complete Multigraphs, 277
Glover, H. H.: See Decker, R. W.
Godsil, C. D.: Matching and Walks in Graphs, 285
—— and Gutman, I.: On the Theory of the Matching Polynomial, 137
Gutman, I.: See Godsil, C.D.

Harary, F.: Homage to the Memory of Kazimierz Kuratowski, 217
——: See Akiyama, J.
——: See Blass, A.
Holt, D. F.: A Graph which is Edge Transitive but not Arc Transitive, 201
Howorka, E.: A Characterization of Ptolemaic Graphs, 323
Huneke, J. P.: See Decker, R. W.

Ito, T.: On a Graph of O'Keefe and Wong, 87

Jackson, B.: Long Paths and Cycles in Oriented Graphs, 145
——, Parsons, T. D., and Pisanski, T.: A Duality Theorem for Graph Embeddings, 55
Jaeger, F. and Shank, H.: On the Edge-Coloring Problem for a Class of 4-Regular Maps, 269

Kane, V. G., Mohanty, S. P., and Straus, E. G.: Which Rational Numbers are Binding Numbers?, 379
Kelmans, A. K.: A New Planarity Criterion for 3-Connected Graphs, 259
Kimble, R. J., Jr., Schwenk, A. J., and Stockmeyer, P. K.: Pseudosimilar Vertices in a Graph, 171

Klerlein, J. B. and Starling, A. G.: Hamiltonian Groups Are Color-Graph-Hamiltonian, 197
Krasinkiewicz, J.: A Note on the Work and Life of Kazimierz Kuratowski, 221

Lehel, J.: Generating All 4-Regular Planar Graphs from the Graph of the Octahedron, 423
Liskovets, V. A.: Enumeration of Nonisomorphic Planar Maps, 115

Menger, K.: On the Origin of the $n$-Arc Theorem, 341
Miller, Z. and Müller, H.: Chromatic Numbers of Hypergraphs and Coverings of Graphs, 299
——: See Buckley, F.
Mohanty, S. P.: See Kane, V. G.
Müller, H.: See Miller, Z.

Nebeský, L.: Every Connected, Locally Connected Graph is Upper Embeddable, 205

O'Keefe, M. and Wong, P. K.: The Smallest Graph of Girth 6 and Valency 7, 79
Parsons, T. D.: See Jackson, B.
Pisanski, T.: See Jackson, B.
Plantholt, M.: The Chromatic Index of Graphs with a Spanning Star, 45
Polimeni, A. D., Straight, H. J., and Yellen, J.: Some Arrowing Results for Trees Versus Complete Graphs, 363

Read, R. C. and Wormald, N. C.: Counting the 10-Point Graphs by Partition, 183
Ruiz, S.: On Strongly Regular Self-Complementary Graphs, 213

Schwenk, A. J.: See Kimble, R. J., Jr.
Shank, H.: See Jaeger, F.
Shanny, R. F.: See Brualdi, R. A.
Simić, S.: See Cvetković, D.
Simmons, G. J.: Maximal Non-Hamilton-Laceabie Graphs, 407
Slater, P. J.: See Buckley, F.
Starling, A. G.: See Klerlein, J. B.
Stockmeyer, P. K.: See Kimble, R. J., Jr.
Straight, H. J.: See Polimeni, A.D.
Straus, E. G.: See Kane, V. G.

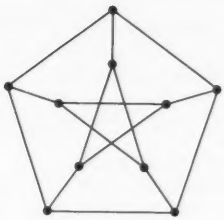
Thomassen, C.: Kuratowski's Theorem, 225
——: Nonseparating Cycles in $k$-Connected Graphs, 351
——: A Remark on Factor Theorems of Lovasz and Tutte, 411
——: See Bermond, J. C.
Tucker, T. W.: Some Results on the Genus of a Group, 337

Vince, A.: Locally Homogeneous Graphs from Groups, 417

Wojda, A. P.: Meyniel's Theorem for Strongly $(p,q)$-Hamiltonian Digraphs, 333
Wong, P. K.: See O'Keefe, M.
Wormald, N. C.: See Read, R. C.

Yap, H.-P.: A Construction of Chromatic Index Critical Graphs, 159
Yee-Hock, P.: See Chong-Keang, L.
Yellen, J.: See Polimeni, A. D.
Zaslavsky, T.: Characterizations of Signed Graphs, 401

# Journal of Graph Theory



Volume 5

1981

**Frank Harary**
Founder-Editor

**Ralph J. Faudree**
**Richard H. Schelp**
Managing Editors

A Wiley-Interscience Publication
**John Wiley & Sons, Inc.**
New York Chichester Brisbane Toronto Singapore

ASSOCIATE EDITORS

**Allan J. Schwenk**
Department of Combinatorics and Optimization
University of Waterloo
Waterloo, Ontario, Canada N2L 361

**Carsten Thomassen**
Mathematics Institute Byan. 303
The Technical University of Denmark
2800 Lyngby, Denmark

EDITORIAL BOARD

**Jin Akiyama,** Nippon Ika University
**Lowell W. Beineke,** Purdue University
**Jean-Claude Bermond,** Université de Paris—Sud
**Frank Boesch,** Stevens Institute of Technology
**Béla Bollobás,** Louisiana State University
**J. Adrian Bondy,** University of Waterloo
**Gary Chartrand,** Western Michigan University
**Fan R. K. Chung,** Bell Laboratories
**D. M. Cvetković,** University of Belgrade
**Paul Erdös,*** Budapest
**Roberto Frucht,*** Santa Maria University
**Martin Gardner***
**Ronald L. Graham,** Bell Laboratories
**Piet W. Kasteleyn,** University of Leiden
**Linda Lesniak-Foster,** Western Michigan University
**László Lovász,** Bolyai Intezete
**C. St. J. A. Nash-Williams,** University of Reading
**E. M. Palmer,** Michigan State University
**George Pólya,*** Stanford University
**Gerhard Ringel,** University of California—Santa Cruz
**R. W. Robinson,** University of Michigan
**Hoon-Heng Teh,** National University of Singapore
**W. T. Tutte,** University of Waterloo
**Arthur T. White,** Western Michigan University

* *Honorary member.*

**Allan Wittman** Publisher
**Ed Barnas** Supervising Editor
**Allan Ross** Production Editor
**Esther Gilbert** Production Manager
**Juan Astudillo** Subscription Manager

Published quarterly, one volume per year, by John Wiley & Sons, Inc. Copyright © 1981 by John Wiley & Sons, Inc., 605 Third Ave., New York, New York 10158. All rights reserved. Reproduction or translation of any part of this work beyond that permitted by Sections 107 and 108 of the United States Copyright Law without the permission of the copyright owner is unlawful. Second-class postage paid at New York, New York and at additional mailing offices.

The code and copyright notice appearing at the bottom of the first page of an article in this journal indicate the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients, on the condition that the copier pay for copying beyond that permitted by Sections 107 and 108 of the U.S. Copyright Law. The per-copy fee for each article appears after the dollar sign and is to be paid through the Copyright Clearance Center, Inc., 21 Congress St., Salem MA 01970. (The fee for articles published prior to 1978 is $1.00 per article.) This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Such permission requests and other permission inquiries should be addressed to the publisher.

**Subscription price (1982):** $60.00 per volume. Postage and handling outside U.S.A.: $9.00. Please allow four weeks for processing of a change of address. Claims for undelivered copies must be made no later than three months following the month of publication. Missing copies will be supplied when losses have been sustained in transit and where reserve stock will permit.

# Journal of Graph Theory

## Contents of Volume 5, 1981

### Number 1, Spring 1981


Cycles in Digraphs—A Survey 1
*J. C. Bermond, C. Thomassen*

The Chromatic Index of Graphs with a Spanning Star 45
*M. Plantholt*

A Duality Theorem for Graph Embeddings 55
*B. Jackson, T. D. Parsons, T. Pisanski*

The Smallest Graph of Girth 6 and Valency 7 79
*M. O'Keefe, P. K. Wong*

On a Graph of O'Keefe and Wong 87
*T. Ito*

The Genus of the 2-Amalgamations of Graphs 95
*R. W. Decker, H. H. Glover, J. P. Huneke*

A Graph and its Complement with Specified Properties. IV. Counting Self-Complementary Blocks 103
*J. Akiyama, F. Harary*

A Note on Constructive Methods for Ramsey Numbers 109
*F. R. K. Chung*

**Research Announcement**

Enumeration of Nonisomorphic Planar Maps 115
*V. A. Liskovets*

Information for Contributors 119

Forthcoming Articles 121


### Number 2, Summer 1981


On the Reconstruction of Locally Finite Trees 123
*T. Andreae*

On the Theory of the Matching Polynomial 137
*C. D. Godsil, I. Gutman*

Long Paths and Cycles in Oriented Graphs 145

*B. Jackson*

A Construction of Chromatic Index Critical Graphs 159
*Hian Poh Yap*

An Upper Bound on the Size of the Largest Cliques in a Graph 165
*A. Billionnet*

Pseudosimilar Vertices in a Graph 171
*R. J. Kimble, Jr., A. J. Schwenk, P. K. Stockmeyer*

Counting the 10-Point Graphs by Partition 183
*R. C. Read, N. C. Wormald*

Hamiltonian Groups Are Color-Graph-Hamiltonian 197
*J. B. Klerlein, A. G. Starling*

A Graph which is Edge Transitive but not Arc Transitive 201
*D. F. Holt*

Every Connected, Locally Connected Graph is Upper Embeddable 205
*L. Nebeský*

A Note on Path and Cycle Decompositions of Graphs 209
*D. deCaen*

On Strongly Regular Self-Complementary Graphs 213
*S. Ruiz*

**Number 3, Fall 1981**

Homage to the Memory of Kazimierz Kuratowski 217
*F. Harary*

A Note on the Work and Life of Kazimierz Kuratowski 221
*J. Krasinkiewicz*

Kuratowski's Theorem 225
*C. Thomassen*

A Kuratowski Theorem for the Projective Plane 243
*D. Archdeacon*

On the Existence of Generalized Good and Equitable Edge Colorings 247
*D. de Werra*

A New Planarity Criterion for 3-Connected Graphs 259
*A. K. Kelmans*

On the Edge-Coloring Problem for a Class of 4-Regular Maps 269

*F. Jaeger, H. Shank*
The λ-Complete Multigraphs 277
*M. L. Gardner*
Matching and Walks in Graphs 285
*C. D. Godsil*
Chromatic Numbers of Hypergraphs and Coverings of Graphs 299
*Z. Miller, H. Müller*
Hamiltonian Line Graphs 307
*R. A. Brualdi, R. F. Shanny*
A Census of Maximum Uniquely Hamiltonian Graphs 315
*C. A. Barefoot, R. C. Entringer*
A Characterization of Ptolemaic Graphs 323
*E. Howorka*
Meyniel's Theorem for Strongly $(p,q)$-Hamiltonian Digraphs 333
*A. P. Wojda*
Some Results on the Genus of a Group 337
*T. W. Tucker*
Forthcoming Articles 339

**Number 4, Winter 1981**

On the Origin of the $n$-Arc Theorem 341
*K. Menger*
Nonseparating Cycles in $k$-Connected Graphs 351
*C. Thomassen*
Quadrilateral Embeddings of Bipartite Graphs 355
*I. Anderson*
Some Arrowing Results for Trees Versus Complete Graphs 363
*A. D. Polimeni, H. J. Straight, J. Yellen*
On an Adjacency Property of Graphs 371
*G. Exoo*
Which Rational Numbers are Binding Numbers? 379
*V. G. Kane, S. P. Mohanty, E. G. Straus*
Generalized Line Graphs 385
*D. Cvetković, M. Doob, S. Simić*
Characterizations of Signed Graphs 401
*T. Zaslavsky*

Maximal Non-Hamilton-Laceable Graphs 407
*G. J. Simmons*
Locally Homogeneous Graphs from Groups 417
*A. Vince*
Generating All 4-Regular Planar Graphs
from the Graph of the Octahedron 423
*J. Lehel*
On Graphs Containing a Given Graph as Center 427
*F. Buckley, Z. Miller, P. J. Slater*
Paley Graphs Satisfy All First-Order
Adjacency Axioms 435
*A. Blass, G. Exoo, F. Harary*
A Remark on Factor Theorems of Lovász and Tutte 441
*C. Thomassen*
On Graphs Without Multicliqual Edges 443
*L. Chong-Keang, P. Yee-Hock*
Author Index 453
Volume Contents Page i
Volume Contents iii